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# Revealing spaces for community engagement

## **Sarah Inman**

University of Washington  
Human-Centered Design &  
Engineering  
Data Ecologies Lab  
Seattle, WA USA  
Sinman1@uw.edu

## **Abstract**

This research sheds light on environmental data practices in Third Sector Organizations and explores the link between knowledge production and non-profit organizations taking the State of Alaska's Salmon and People (SASAP) project as point of departure. This case explores how data mediates relationships with natural resources for various communities of practice and how

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to better study these configurations.

## **Author Keywords**

Methodology; Participatory Design; Non-profit; Data Science

## **ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous

## **Introduction**

The State of Alaskan Salmon and People project is a collaborative project of interdisciplinary experts concerned with biophysical, sociocultural, and political questions regarding wild Alaskan salmon. Three researchers from the Human-Centered Design and Engineering program were added to the project as "data ethnographers" to study the phenomena of data scientific practices in the natural sciences and to explore how data are made public and accessible. Although sometimes stated that the "salmon are incidental", what has become clear is that salmon are anything but incidental to the communities that depend on them [4].

Salmon is not only a source of sustenance and economic development, it is also a symbol of culture for the indigenous people who have been in Alaska for

centuries. However, much of the management and political decisions around salmon are made based on data collected by state and federal government. This work explores the ways that scientists and government entities interface with the public. Ultimately, this work seeks to contribute to discussions about how communities dependent on natural resources are able to contribute to data and policy decision-making.

### **Related Work**

Data registers an object as measurable, countable, and capable of being managed. While it is complex to govern commonly held resources [2], governance can often be understood through the standards and instruments used to create knowledge [6]. Viewing the database as performative, Bowker [1] argues that “if we are only saving what we are counting, and if our counts are skewed in many different ways, then we are creating a new world in which those counts become more and more normalized.” Furthermore, there are specific standards and norms for how data becomes legible to decision-makers.

Given the momentum of standards, the tendency for them to become invisible to the user, and the places of authority in which they reside, one might expect participatory and user-centered design approaches to offer ways of incorporating a more community-based approach to management. However, user-centered design practices have offered similar solutions to diverse users (e.g., affinity diagramming, design thinking, etc...). Taking a more micro-sociological approach, Oudshoorn et al. [5] discuss the ways that the user has been imagined by designers. The claim to design for everybody collapsed into design for one: the designer. They show how designers “assumed that their

own preferences and skills were representative” of the user. As such, this research draws from participatory design methods; however, it seeks to expand the application of participatory design methods to non-profit and community-based organizations.

### **Workshop One: Engaging Researchers and Data Holders**

Our field studies have centered around working group meetings, sites of initial scientific data generation, and digital environments constructing a data archive, which seeks to offer seamless solutions to problems around the acquisition and integration of heterogeneous data. In the SASAP project, most of the data requested is housed within the Alaska Department of Fish and Game and is therefore, predominantly data related to management. As such, other types of data are excluded from this work. While the major thrust of the project is to acquire, clean, annotate, and archive data, there is an ancillary goal of public outreach. As a friendly critique, there are two challenges to reaching “the public” in this project: a) the focus of the main work is to archive data for the research community, and b) the public is broadly conceived making it likely that designs will largely miss the nuances among different communities.

As such, this initial workshop seeks to ask: How might data work moving forward highlight areas of forgotten or unconsidered data? What kinds of data are tractable to policy? In the first workshop, we will engage participants from the research group about their implicit and explicit understanding of data. In our prior work [3], we found that there were 9 major genealogies through which data undergo. We found that engaging with participants in a way that allowed

more nuance would be beneficial, seeking to elicit not only deep understandings of the complexities of data, but also to reveal ways in which other users might potentially use the data. By engaging researchers with regard to their understanding of both the public and the public's interaction with data, we seek to reveal tacit information about the origins and futures of the data.

### **Looking Forward**

A primary goal of engaging in "Untold Stories: Working with Third Sector Organizations" workshop at CHI is to scaffold putting together a citizen science packet that might be used during summer fieldwork. Through generative discussion with other experts in this space, I hope to expand my understanding of engaging non-profit organizations. However, beyond that, I hope to be a part of a community of researchers and practitioners focused on ethically complex and sensitive spaces. I look forward to reflecting on our shared experiences in this space and developing best practices for others interested in working with third sector organizations. The development of a community around these topics will be invaluable to furthering this topic in the broader human-computer interaction and design discourses.

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Sarah Inman is a doctoral student in the Human Centered Design and Engineering program at the University of Washington. She has worked as a designer in an Information Technology department and has a background in Political Science and Science and Technology Studies. Her primary research interests include: 1) sociotechnical practices of large-scale research; 2) individual and collective tensions when solving global problems such as climate change; and 3) design of visualization tools for revealing common errors and transformations in data scientific work. She is currently researching the challenges of drawing together heterogeneous Alaskan Salmon data from across diverse scientific and regulatory actors.